

Pt is a 41 yo female avid athlete who enjoys long distance running and cycling. C/o 7 month h/o right lower extremity claudication after 60-90 minutes of intense cycling or running. Reports right leg numbness and coolness. No symptoms at rest.



Medical History

Left foot surgery 2006

Bicuspid aortic valve



Imaging

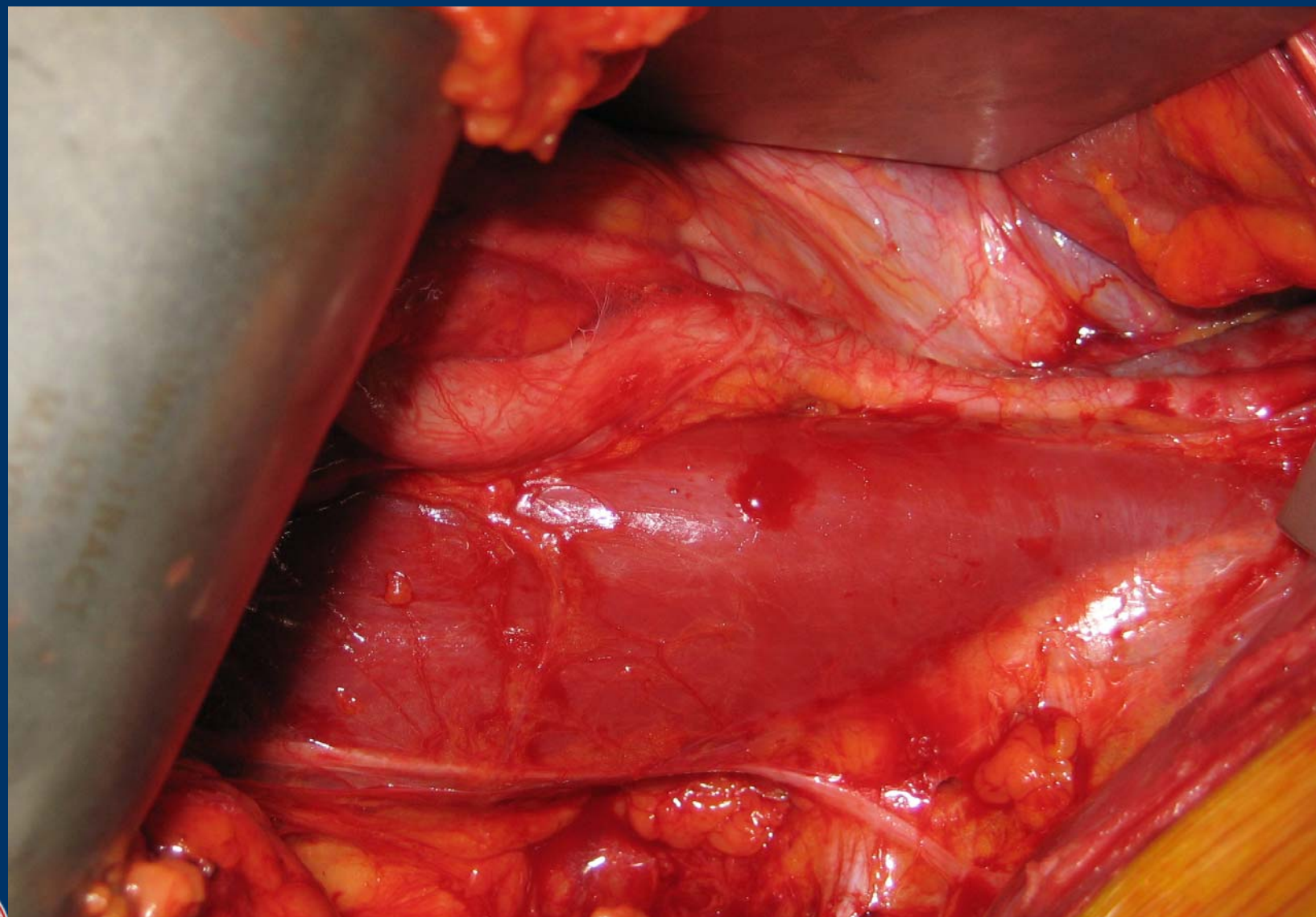
- Duplex: Exercise ABI
 - Right 1.15 to 0.27
 - Left 1.3 to 0.88
- CT angiogram: Narrowed Right external iliac artery

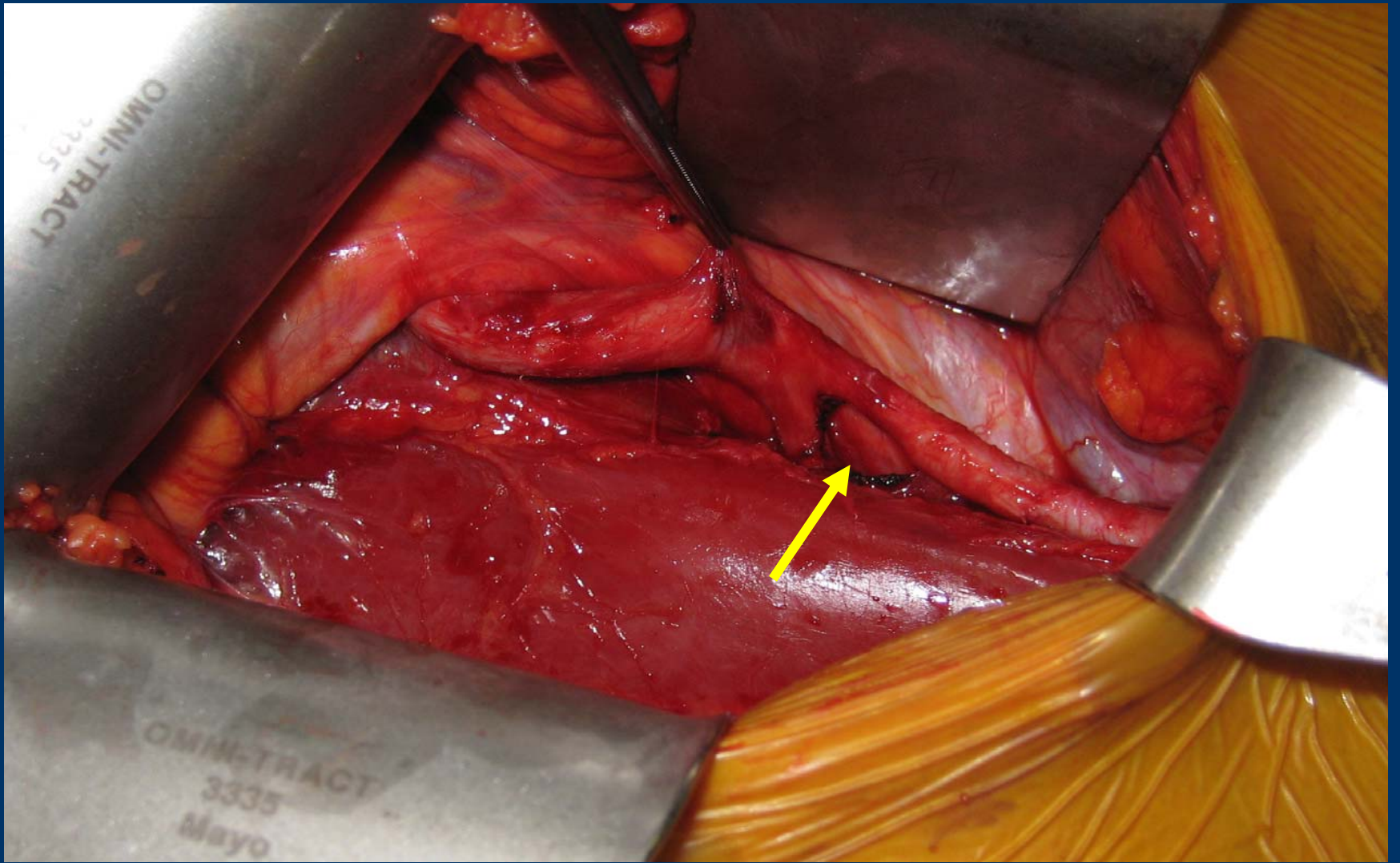


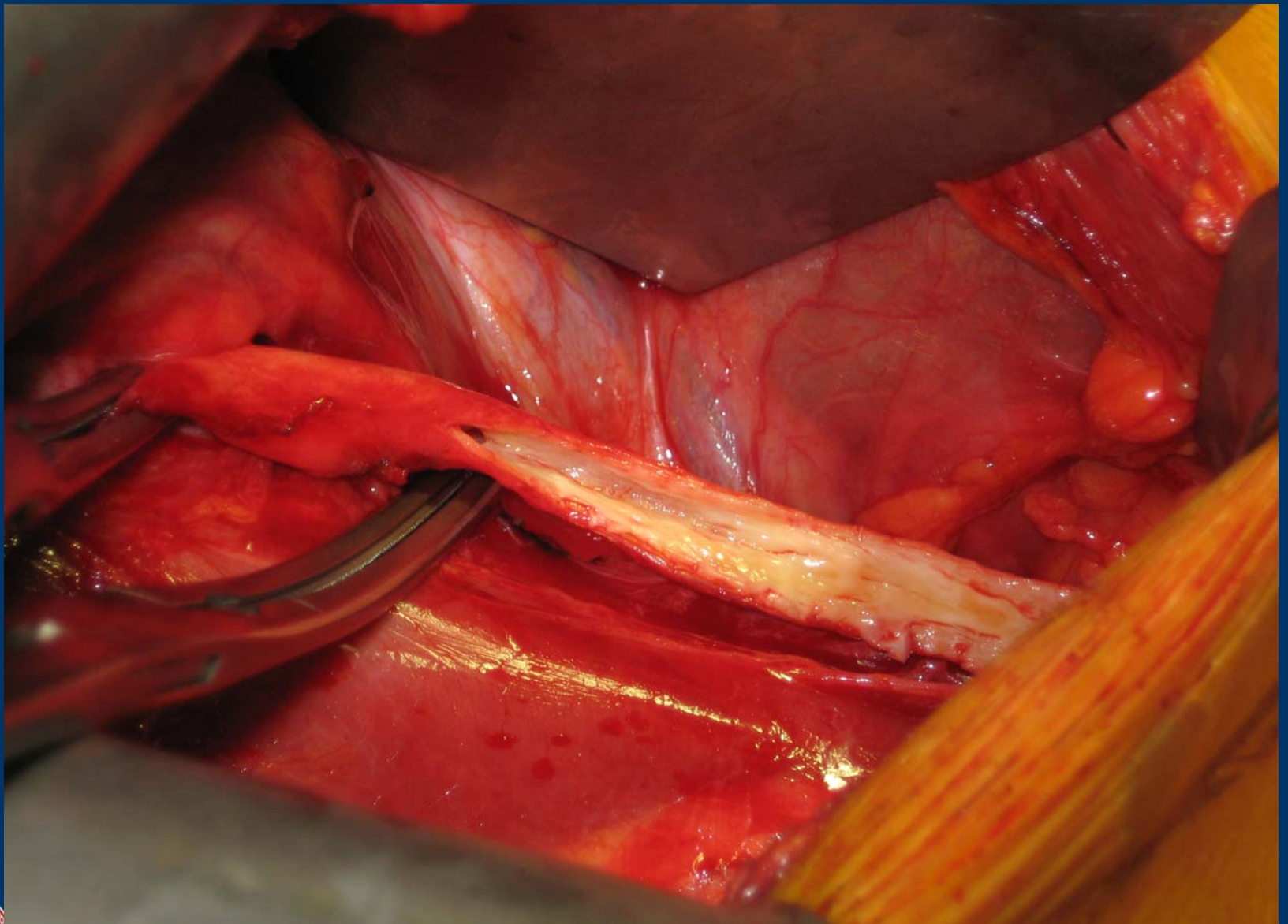
Operation:

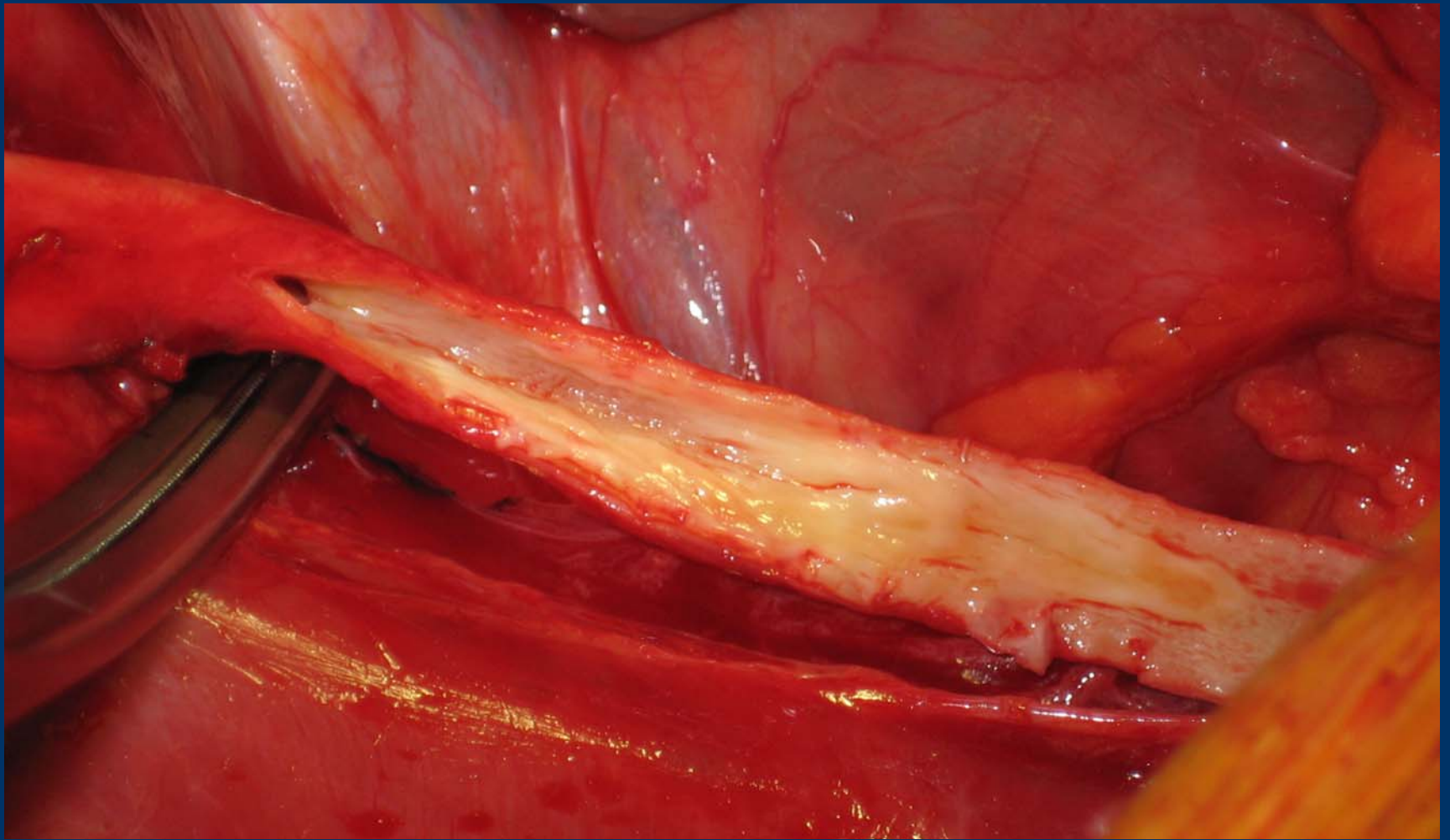
- Right external iliac artery endarterectomy with vein patch angioplasty

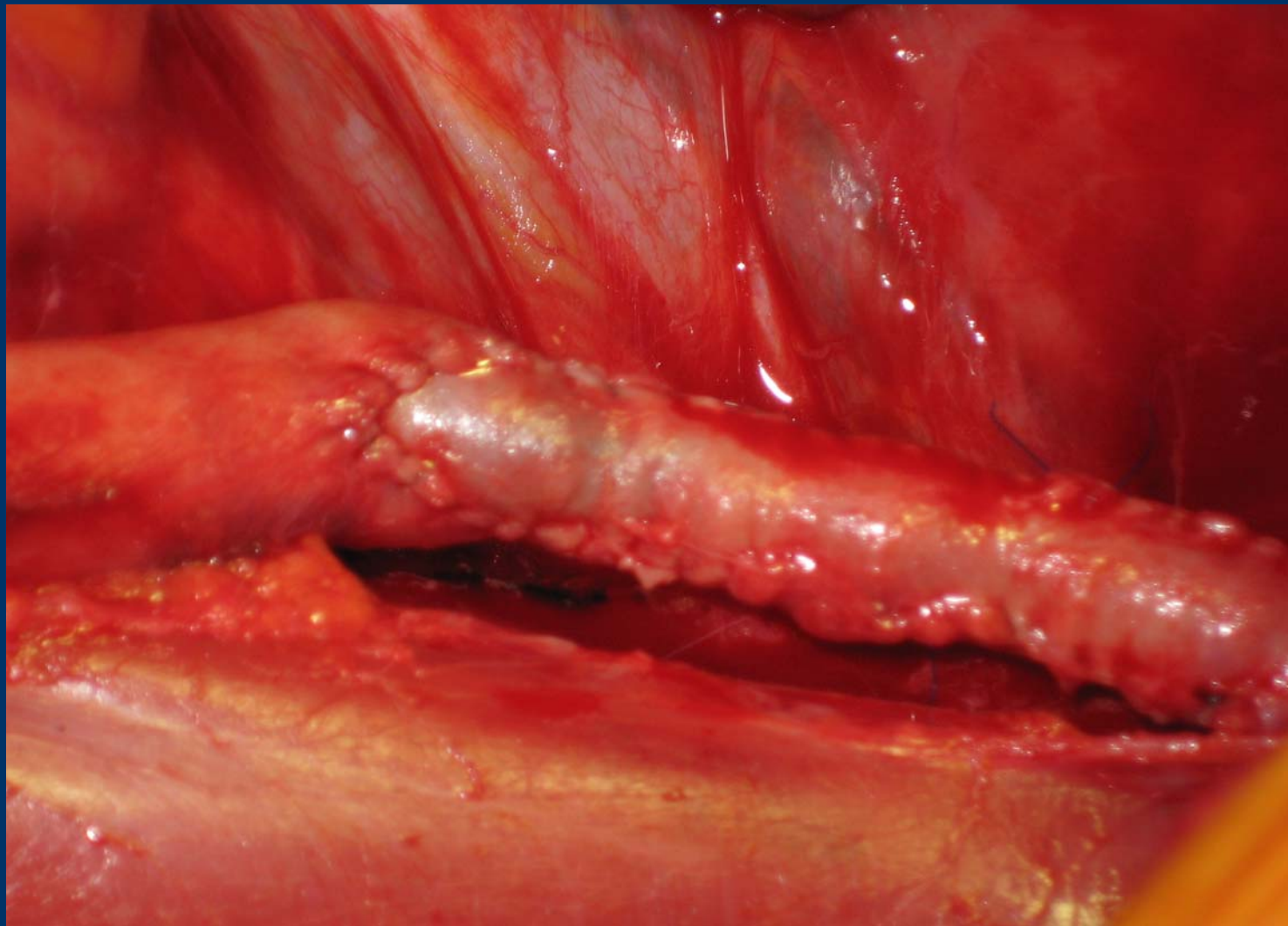


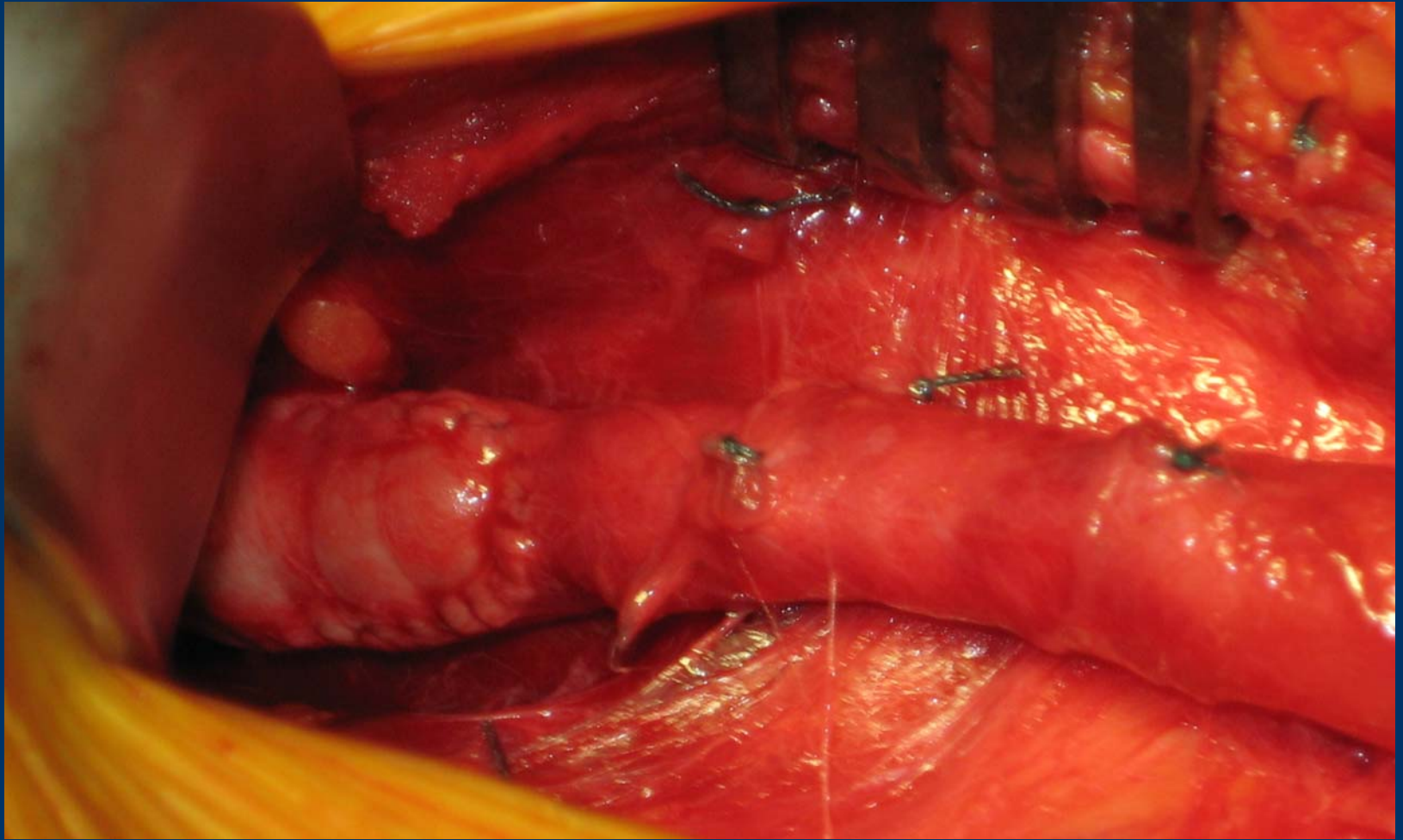












Exercise Associated lower extremity arteriopathy in avid cyclists: Early longitudinal results

K Cherry et al, SVS abstract 2008

- Retrospective analysis of 8 avid cyclists with lower extremity claudication
- 6 males, 2 females (mean age 35)
- c/o thigh and calf claudication with maximal exertion
- Avg time to onset 11 years and 342 miles/week
- Normal resting ABI and drop in exercise ABI <0.8
- Treatment (dacron patch angioplasty, 3 inguinal ligament release, 2 iliofemoral bypass, partial resection and patch angioplasty)
- All with inguinal ligament release
- Of the 11 arterial reconstruction, 8 (73%) was patent, 23% stenosis



Obstructive external iliac arteriopathy in avid bicyclists: New and variable histopathologic features in four women

K Cherry et al, JVS 2002; 36: 565-70

- Retrospective analysis of 4 competitive cyclists undergoing resection and graft placement for segmental external iliac artery disease at Mayo Clinic from 1991-2001
- 4 females (mean age 36, range 24-37), onset 10-13 yrs
- c/o lower extremity claudication with maximal exertion, significant drop in ABI with exercise, bruits (60%)
- Preoperative angiography showed stenotic disease (40-85%)
- Gross examination: wall thickening (smooth cell hyperplasia) and luminal narrowing without aneurysm formation
- Adventitial thickening
- **Hypothesis of injury:** high blood flow and mechanical stress of the cycling position

